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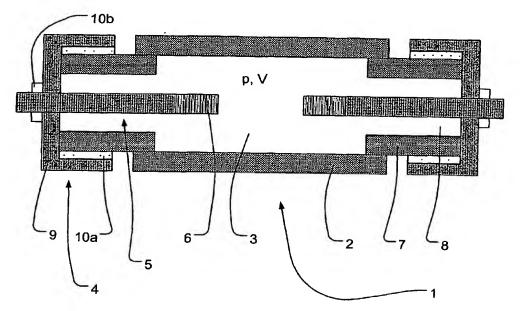
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(54) Title: HIGH-PRESSURE DISCHARGE LAMP, AND METHOD OF MANUFACTURE THEREOF



(57) Abstract: The present invention relates to a ceramic gas tight high-pressure burner (1) comprising an ionisable filling, a method of manufacturing said ceramic gas tight high-pressure burner (1), and a lamp comprising said ceramic gas tight high-pressure burner (1), whereby said ceramic gas tight high-pressure burner (1) comprises a discharge vessel (2) having a discharge cavity (3) with a volume in the range of 3 mm3 to 30 mm3, and an internal filling pressure of the discharge cavity (3) in the range from 0.1 MPa to 4 MPa at room temperature. Furthermore the present invention relates to an end closure construction designed as a three-part, a two-part or a one-part end closure device (4) with a reduced crevice (11).



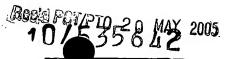
CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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A. CLASSIFICATION OF SUBJECT MATTER								
ÎPC 7 H01J61/82 H01J61/86								
According to International Patent Classification (IPC) or to both national classification and IPC								
B. FIELDS SEARCHED								
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Electronic d	ata base consulted during the International search (name of data b	ase and, where practical, search terms used)					
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C. DOCUMI	ENTS CONSIDERED TO BE RELEVANT							
Category *	Citation of document, with Indication, where appropriate, of the re	Novant pagagae	5.1					
	where appropriate, of the re	nevant passages	Relevant to daim No.					
X	US 2002/070668 A1 (LEVIS MAURICE 13 June 2002 (2002-06-13) figures 1a,2b,8a,8b paragraphs '0002!, '0008!, '0044!, '0076! - '0083!, '01011,15	·	1–9					
X	WO 00/67294 A (KONINKL PHILIPS E NV) 9 November 2000 (2000-11-09) cited in the application abstract; figure 2 page 2, line 8 - line 27 page 3, line 19 - line 22; claim page 4, line 13 - page 5, line 2	1-4,6,8, 9						
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X Further documents are listed in the continuation of box C. X Patent family members are listed in annex.								
"A" document	egories of cited documents: Int defining the general state of the art which is not ered to be of particular relevance ocument but published on or after the International ate	"T" later document published after the international filing date or priority date and not in conflict with the application but clied to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention						
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aler in	art the priority date claimed	& document member of the same patent family						
	ctual completion of the international search June 2004	Date of mailing of the international search	Date of mailing of the international search report 28/06/2004					
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentiaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Fax: (+31-70) 340-3016		Authorized officer Tano, V						

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emational Application No
PCT/IB 03/05225

tion) DOCUMENTS CONSIDERED TO BE RELEVANT	
Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
EP 0 883 160 A (TOSHIBA LIGHTING &	1,9
TECHNOLOGY) 9 December 1998 (1998-12-09) page 5, line 49 - line 56 page 12, line 8 - line 26; figure 1	
EP 1 158 567 A (MATSUSHITA ELECTRIC IND CO LTD) 28 November 2001 (2001-11-28) paragraphs '0081!, '0086!; figures 7,8	1,9
US 6 194 832 B1 (JUENGST STEFAN) 27 February 2001 (2001-02-27) abstract; figures 3a,4 column 7, line 14 - line 45	9,10
EP 0 315 261 A (PHILIPS NV) 10 May 1989 (1989-05-10) abstract	1
page 2, line 8 - line 11 page 3, line 23 - line 25	9
	EP 0 883 160 A (TOSHIBA LIGHTING & TECHNOLOGY) 9 December 1998 (1998-12-09) page 5, line 49 - line 56 page 12, line 8 - line 26; figure 1 EP 1 158 567 A (MATSUSHITA ELECTRIC IND COLTD) 28 November 2001 (2001-11-28) paragraphs '0081!, '0086!; figures 7,8 US 6 194 832 B1 (JUENGST STEFAN) 27 February 2001 (2001-02-27) abstract; figures 3a,4 column 7, line 14 - line 45 EP 0 315 261 A (PHILIPS NV) 10 May 1989 (1989-05-10) abstract page 2, line 8 - line 11

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Form PCT/ISA/210 (continuation of second sheet) (January 2004)



ernational Application No PCT/IB 03/05225

					101710	03/03/25
Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 2002070668	A1	13-06-2002	US US US US WO US	2003034736 6414436 2003052609 2004036393 03030212 2004056593	B1 A1 A1 A1	20-02-2003 02-07-2002 20-03-2003 26-02-2004 10-04-2003 25-03-2004
WO 0067294	A 	09-11-2000	CN WO EP JP US	1302448 0067294 1092231 2002543576 6404129	A1 A1 T	04-07-2001 09-11-2000 18-04-2001 17-12-2002 11-06-2002
EP 0883160	А	09-12-1998	JP EP EP JP JP JP US US	11238488 1274118 1296354 0883160 2002093369 2003162976 2003178710 6353289 2003209986 2002047526	A2 A1 A A A A B1 A1	31-08-1999 08-01-2003 26-03-2003 09-12-1998 29-03-2002 06-06-2003 27-06-2003 05-03-2002 13-11-2003 25-04-2002
EP 1158567	Α	28-11-2001	EP JP JP US	1158567 3385010 2002110099 2002017848	B2 A	28-11-2001 10-03-2003 12-04-2002 14-02-2002
US 6194832	B1	27-02-2001	DE AT CA DE EP HU JP	19727428 233018 2241656 59807230 0887840 9801468 11073919	T A1 D1 A2 A2	07-01-1999 15-03-2003 27-12-1998 27-03-2003 30-12-1998 28-01-1999 16-03-1999
EP 0315261	A	10-05-1989	CN EP HU JP US	1042449 0315261 48771 1149359 4970431	A1 A2 A	23-05-1990 10-05-1989 28-06-1989 12-06-1989 13-11-1990